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Recommended Citation

Simpson, Carl and Schmitz, Sharon, "Analysis of Student Demand For Courses at Western Fall Quarter, 2001" (2002). *Office of Survey Research*. 564.

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ANALYSIS OF STUDENT DEMAND FOR COURSES AT WESTERN FALL QUARTER, 2001

**Carl Simpson
Sharon Schmitz**

January 28, 2002

**WWU OFFICE OF INSTITUTIONAL RESEARCH & RESOURCE PLANNING
Technical Report Series Report 2002-01**



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To: Various Esteemed Friends and Colleagues (I know that's a lame attempt to excuse the mass mailing quality of this memo. My apologies.)

From: Carl Simpson, Director *Carl*

Date: January 29, 2002

Subject: Departmental Reports on Student Demand for Courses, fall 2001

Enclosed is a copy of a report we just finished that analyzes some aspects of students "demand" for courses at Western.

I also wanted to let you know that all departments, programs and colleges are being supplied with tailored reports showing the relative demand for each course they offered in fall, 2001. We are working now on the parallel data for Winter, 2002, and will also attempt the same for Spring, 2001. It is my hope that these data will be of some assistance as departments formulate their course offerings for the coming year.

"Demand" was calculated using the Registrar's record of student registration attempts. This is the first time Western has been able to report such information. These data are not perfect. They underestimate the true number of students interested in particularly popular courses because Classfinder alerts students to avoid attempting to enroll for courses that are full. Also, this type of "demand" is not true demand in the usual sense. Many registration attempts, which we count as demand, are made only because an earlier attempt to enter a different course failed.

Nonetheless, the number of students who attempted to enter each course, whether successfully or not, does provide an indicator of the likelihood that additional seats would be filled if made available. The course lists also show cases where courses enroll fewer than the planned limit, but that information is, of course, not new.

If you see other uses to which this dataset on students' attempts to register could be put, please let me know.

INTRODUCTION

Each time a student attempts to register for any Western course, a computer record is created, including the student ID, the course sought, and the outcome of the attempt. Using those records, we can generate estimates of the demand for each course at Western. This report presents findings for fall quarter, 2001. We plan parallel reports for winter and spring quarters—hopefully early enough to be used by departments considering course offerings for 2002-2003.

The major limitation of the data presented here is that students use Classfinder to identify courses that are already filled vs. open. That means some demand for popular courses is not recorded, because students begin registration knowing the courses are already filled and do not attempt to register for them. In all likelihood, our findings regarding demand levels for particular courses are accurate except for the highest demand courses, which are underestimated. They will still appear as high demand, but the level we report is undoubtedly lower than actual demand.

The first section of this report is devoted to a detailed description of the data we worked with and the ways in which we defined student demand. Anyone wishing to fully understand the data tables that accompany this report should read the section titled “The Data.” Those who prefer not to read that section can skip to the “Some Findings” section. For those skipping “The Data,” we include the following summary of our definition of student “demand.”

DEFINITION OF DEMAND: We count one instance of “demand” each time a particular student attempts (successfully or unsuccessfully) to enroll in a particular on-campus, state-funded, lecture or seminar (group instructed) course, given that the student was procedurally eligible to enroll in the course, that the student did not later drop the course, and that the registration attempt was not rejected because the student had already enrolled in a course with conflicting meeting times. How often the student attempted to enroll in any one class is not considered; only one instance of demand is counted for a given student attempting to enter a given course.

THE DATA

During fall, 2001, 13,880 potential students attempted a total of 133,596 times to register for a course, 127,643 by students who enrolled on the main campus. The final result was 49,729 course registrations, including independent study courses. Most (84.5%) of these attempts were made via the Internet, with another 11.8% via telephone and 3.7% in person. Main campus students registered more often via the Internet (85.7%) and only 2.8% of the time in person, while off campus registration attempts were more often made in person (24.3%) or via phone (18.5%).

For purposes of this analysis, several types of course sections were eliminated from consideration: all courses not funded by the state, all courses taught off campus, all lab

sections (their associated lecture sections were retained, providing a single count for each lecture-lab course), all independent courses (independent reading or research, internships, field experience, practica, thesis), and a set of courses listed with the Registrar as seminars or lecture courses but operating as independent project-based courses rather than as group instruction courses. These reductions eliminated a total of 17,285 course attempt records: 8,628 off campus or self-supporting, 3,711 independent study format, and 4,946 lab section registration attempts.

In addition, all cases in which a student was successful in registering for a class but then dropped it prior to peak enrollment are eliminated. To the extent possible, we want excess demand figures to indicate that the student would have enrolled in the course if s/he had been able to.

After eliminating the types of courses listed above, along with cancelled sections, our analysis ended up with 12,410 students who attempted to enroll for one or more on-campus, state-supported group instruction courses. Their enrollment targets were 943 unique courses offered during fall, 2001. The total number of *sections* was, of course, much higher, as some courses offer multiple sections. In addition, many 500 level courses meet together with parallel 400 level courses, and a few courses at 200, 300 or 400 levels meet together. Each of these pairings is treated in the present analysis as only one course, since our goal is to explore course demand as it actually impacts faculty time. The total number of course sections included among the 943 fall 2001 courses we are analyzing is 1,499. A total of 33 courses offered five or more sections each. Two GUR courses, English 101 and Math 102, offered many sections (31 and 16).

Defining "Course Demand" for Analysis

For this analysis, we count one instance of demand for a course each time a different student attempts to enroll, no matter how many times the attempt is repeated. Persistent attempts to register say something about the importance of particular courses to particular students. However, even one hundred attempts by one student to enter one course represent only one student seeking admission into one course. The level of excess demand is not affected by the number of times each student attempted to register for the course—although the urgency of access to a course may be indicated by students' repeated attempts to enroll.

The "demand" that is most important to departmental and college planning is the number of different students who attempted at least once to enroll in each course—who entered the course or would have entered it if it had been available to them. If a course offered 50 seats and 50 students attempted to register for it, demand is met. If 100 students attempted to enter the course, there is enough excess demand to fill a second section if the department can offer it. At the other extreme, where many fewer students enroll than the course limit allowed, demand is low. Departments can, of course, see that without this report, although these cases are included here also.

In addition, some registration attempts are made in error and do not represent genuine course demand (9,305 records). These receive messages explaining that the course in question is not actually available to the student for procedural reasons. Examples include that the student accidentally attempted to register for the same course twice, had not fulfilled required prerequisites or class standing, was attempting to register for more credits than allowed at that stage of registration, or failed to register for a co-requisite. These procedural cases are

not included as indicating "demand" in the analysis presented here. The student wanted the course, but enrollment was made impossible for reasons unrelated to the course's availability. Opening new sections would not allow any more of these students to enroll. Therefore, these cases are not counted as meaningful demand.

Finally, we decided not to count as demand cases where enrollment was impossible because of schedule conflicts. These are in fact demand in the sense that if a new section opened at a different time, the student would probably have entered it. However, the realities of scheduling are that some desired courses will always meet at the same times. That cannot be changed. While the particular students who confront schedule problems might change from term to term, each course will lose some enrollment possibilities to schedule conflicts. Further, we don't even see most cases of schedule conflicts, because students have noticed and avoided them before attempting to register. It therefore seemed the more conservative basis for estimating excess demand to exclude schedule conflicts from being counted as demand. That decision rule eliminated another 4,140 cases from the original data.

In summary: We count one instance of "demand" each time a particular student attempts (successfully or unsuccessfully) to enroll in a particular on-campus, state-funded, lecture or seminar (group instructed) course, given that the student was procedurally eligible to enroll in the course, that the student did not later drop the course, and that the registration attempt was not rejected because the student had already enrolled in a course with conflicting meeting times. How often the student attempted to enroll in any one class is not considered; only one instance of demand is counted for a given student attempting to enter a given course.

Even within this definition, we faced the problem that one student might have made several attempts to enroll in a course, making it difficult to establish which attempt we count. To address this issue, we "ranked" the responses given by the registration software to attempts to register, according to how close the attempt came to successful enrollment. The highest level is a successful enrollment in a course. Other attempts were satisfactory on all procedural grounds but the course was full—the second level. A third level consists of procedural issues such as courses restricted to majors only. Once this hierarchy was established, then each time a student attempted to enroll in a course more than once, we counted only the one time that was highest in the hierarchy. For example, if a student first tried a course that was restricted during the first period of registration, then tried again after the restriction was lifted but found the course full, and then tried again and was successfully enrolled, the one record we would keep is the enrollment.

This procedure prevents us from double counting students' attempts to enroll. Our calculation of "demand" is based on only one record for each particular course, for each student who attempted to enroll in it. In addition, we can report how close each student came to successfully enrolling in each course s/he attempted. The final result is that the analysis reported here is based on 63,235 computer records, each representing one attempt by one student to register for one of 1,499 sections of 943 appropriate courses. The statuses accorded to those cases, showing the levels in the demand hierarchy we created, are shown below:

Status of Attempts to Register Counted as "Course Demand"

<u>Status and Rank</u>	<u>Number</u>	<u>Percent</u>
LEVEL ONE (SUCCESS):		
Successfully enrolled in the course	42,593	63.2
LEVEL TWO (FULL):		
Section full and closed	10,925	16.2
LEVEL THREE (RESTRICTED):		
Course override/permit required	4,620	6.9
Major restriction	2,246	3.3
Other course restriction	2,851	4.2
TOTAL	63,235	100.0%

Demand for each course offered in each department is reported in these three categories, and is also totaled to create a ratio of total demand (the sum of all three levels) to seats available in each course.

SOME FINDINGS

The primary value of this student demand exercise is to offer information departments might use to refine course offerings. Data for each department is enclosed with this report. It also seems worthwhile to offer some descriptive findings concerning the patterns of student demand that emerge university-wide. These findings speak both to the departmental task of offering courses and also to the student experience of attempting to register for them.

The most basic finding we can offer is that "demand" is 31% higher than the number of seats offered. What this particular demand ratio (1.31) means is that, on average, students attempt to enroll in 1.31 courses for every one course they end up enrolled in. For this analysis, those enrollments are calculated irrespective of the number of credits each course is worth, meaning that an attempt to enroll in a one credit course counts the same as an attempt to enroll in a five credit course.

This finding is conservative in that students attempting to enroll in several sections of the same course are counted only once for that course and in that many students who use Classfinder did not even attempt to enroll in courses they wanted but knew were full. It is also conservative when viewed in the aggregate, because it includes as "supply" all seats in all courses, even those that are highly specialized and underenrolled.

This demand figure does not, however, operate in the aggregate like economic demand. That is, a demand of 131% does not mean that we could offer 131% of our current courses and fill them all. The demand is aggregated from many occasions when students attempted to enter one course, were unable, and so attempted another. A student trying two courses to get one is counted as "demand" twice, even if they only needed one course to complete their schedule. This type of "demand," therefore indicates not a total level of demand in the usual

sense, but a summary measure of how many attempts students make before securing each course they register for.

When course demand is reported at the course level, its meaning is more similar to the usual meaning of the term, demand. It shows how many more students, if any, would have taken the course had it been available to them. Even here, however, there is a caveat: if other departments were to open up their most popular courses, some of the demand for my department's courses would vanish, because some students attempted to register for my department's courses only because they had been unable to enter popular courses in other departments.

Nonetheless, the value of the demand figures produced in this way is that they can tell us where students' initial interests fell, as opposed to where they eventually enrolled. In cases where more students attempt entry into a course than can be accommodated, it is reasonable to speak of excess demand. What that "excess" means, however, is that these courses are "popular" or perhaps required for many students, and that the course limit is set below the level of student interest. High demand courses would therefore fill more seats if more were available, largely at the expense of seats in other courses. Both low class limits and high demand can result in an excess of demand.

Patterns of Demand

The following descriptive findings provide an overview of university-wide patterns regarding demand at the course level.

- Excess demand is greatest in the largest courses. Courses with enrollment limits of 75 or higher experience an average of 1.46 different students attempting to register for each available seat. Courses in the 30-75 range have a 1.22 average, and courses with limits below 30 average 1.21 attempts per available seat. For the 82 courses labeled as "seminars," demand level is 0.98.
- Consistent with findings on course size, lower division courses experience greater excess demand than do upper division courses. The demand ratio for 100-200 level courses is 1.51 students attempting per successful registration. For 300-400 level courses, the ratio is 1.15, with the preponderance of courses with excess demand in the 400 level. Among 500 level courses, the ratio is 0.58. That is, for every 100 seats available, 58 students attempted to register. The only levels at which Western had, on average, any excess capacity are the 500 level, with substantial excess, and the 400 level. Of course, these averages obscure departmental differences.
- During fall, 2001 there were also marked differences in level of excess demand generated in each of the GUR areas. The demand ratio for non-GUR courses was 1.15. In ascending order, the ratios for GUR areas were: science option B, 1.15; math, 1.34; Communications A, 1.35; social sciences, 1.49; humanities, 1.55; Science option A, 1.61; Comparative, Gender and Multicultural Studies, 2.00; and Communications B, 2.50. (In several cases, especially Communication A and Math, a great deal of differential demand for sections meeting at desirable times also occurred.)
- The highest excess demand in fall, 2001 was for courses carrying three or five credits (1.41 and 1.48, respectively) as opposed to other credit levels.

Taken together, the findings above overlap in ways that suggest a quite coherent pattern. Excess demand is greatest for the lower division, in particular the GUR, and is therefore also greatest in larger courses, which predominate in the lower division. Western, like nearly every other college and university, already enrolls more students per course in the lower division than in the upper division. High-enrollment general courses always underwrite the cost of more specialized seminars in the upper division of the major. These findings add the observation that lower division students are experiencing greater difficulty gaining access to the courses they want, despite the large number of seats in each. It may be that Western needs to reassess its balance of lower and upper division seats offered, or it may be that the more interchangeable nature of introductory courses, along with the fact that lower division students register later creates the appearance of greater excess demand. Lower division students are able to seek any of a wide range of courses, whereas majors must choose from a small set of options.

Looking at section meetings, rather than at courses, we can examine relative demand levels for different hours of the day. The conventional wisdom is that the 9-3 period has especially high demand. Findings bear that out, but also show that demand is driven sufficiently by the courses students want to partially override time preferences, except for those after 4:00 and before 6:00 pm. No doubt in part because of Classfinder, and also because students must go where the courses are, demand levels are much more evenly distributed across sections than one might assume. The table below illustrates. (Note: the overall level of excess demand shown below is greater than 1.31 because demand below is counted as students attempting to enter any section of any course. A great deal of jockeying for position goes on among sections in courses such as English 101 and Math 102. A student counted only once as demand for the course may, therefore, be counted several times as demand for each discrete section of the course.)

<u>Hour course begins (any days)</u>	<u>Demand ratio</u>
8:00	1.36
8:30	1.85
9:00	1.60
10:00	1.83
11:00	1.98
11:30	1.80
12:00	1.73
1:00	1.66
2:00	1.42
2:30	1.55
3:00	1.24
4:00	1.32
5:00	0.92
6:00	1.74
32 sections at odd times (9:30, 10:30, 12:30, 1:30, 3:30)	1.45

The table above shows demand rising sharply at 8:30 and staying very high through 11:30 and quite high through 2:30, remaining moderate through 4:00, dropping at 5:00, and then rising again at 6:00. To the extent that limited facilities continue to force Western to offer courses outside the highest demand period, departments might wish to consider the "evening course" beginning at 6:00 as a more popular option than the late afternoon. The thirty 6:00 courses this fall offered 865 seats, and 1,508 students attempted to register for them. In contrast, the thirty courses offered at 5:00 made 707 seats available and received 652 registration attempts, well under half the number who attempted 6:00 courses.

The Student Experience

On average, students attempted 5.43 different courses enroute to their final enrollment—3.45 in which they enrolled successfully and 1.98 that were attempted but did not result in an enrollment. The average number of attempts to register made per course was 1.77—1.63 per course in which students ended up enrolling and 2.02 per course in which they did not enroll. Those averages are composed of many cases involving only one attempt and a smaller number of cases of repeated attempts. More than three-fourths (78.2%) of attempts to register for a course were successful the first time or the student decided after one failure not to try that course again.

A total of 5,269 (42.5%) of the 12,410 students who attempted to register were able to enroll successfully in *all* of the courses they first attempted to enter. (Some required repeated attempts to complete the enrollment, but eventually got every course they tried for.) Another 20.9% of students were able to enroll in all but one of the courses they attempted. An additional 18.7% attempted 2-3 courses unsuccessfully before completing their registration, while 8.2% had 4-5 misses, 4.0% had 6-7 misses, and 5.8% had more than seven misses.

A tiny handful who began registration after most courses were full attempted many different courses before filling their schedule. These few no doubt felt frustrated and set the tone for sometimes apocryphal discussions about access difficulties. The more than one-in-six students (17.9%) who were unable to register for four or more courses are perhaps a more critical concern. These students succeeded in registering for half or fewer of the courses they attempted, and presumably failed to enter the courses they most wanted. One-sixth of the student body, which translates to about one-third of lower classmen, who are most heavily impacted, is a sufficient proportion experiencing at least moderate course access problems to reinforce the perceptions built on the few most extreme cases.

The proportion of students who were unable to register successfully for all their first choice courses is very low for graduate and senior level courses, and increases as course level decreases, with the highest proportion of failures occurring for 100-200 level courses. That pattern holds true both for the proportion who experience failure to enroll for at least one course and also for those failing a larger number of times. This pattern is made inevitable by Western's system of registration priorities, which is geared to ensure that upper classmen, who are closest to the degree and who have the most restricted range of course possibilities to choose from are least likely to encounter problems with course access.

Looking only at cases of successful course registration, 89.0% of these students succeeded on the first or second try, and 98.0% succeeded within the first six tries. However, persistence paid off in some cases. The record is held by a student who managed to enroll for Math 114 on the 359th attempt, after trying one section 148 times, another two sections 105 times each,

and a final section once. A close second enrolled in FMDS 205 on the 339th try. However, only 0.15% of all registration attempts (19 out of 12,410 students) made 25 or more attempts to enter a single course before succeeding, and the majority of those represent attempts for multiple sections, with students trying the most desirable time slots first, before moving on to others.

Looking only at cases in which students were *not* successful in their attempts to enroll for particular courses, we find 81.5% made only one or two attempts before moving on. Another 17.3% tried between three and ten times, for a total of 98.8% who stopped after ten or fewer tries. Here too, however, a few students tried repeatedly to gain admission to particular courses. Fourteen students tried a single course unsuccessfully more than 50 times, and another 28 did so between 25 and 49 times. These cases of heroic efforts to enter a highly desired course also reinforce the perception that Western courses are difficult to access.

One final observation is of interest in terms of students' registration process. A fair proportion of courses that turned away students by virtue of being full ended up having some seats available at peak enrollment (the fifth day of the quarter). We also know from student survey that a surprisingly high proportion of all students manage to get access to at least one course via instructor permission. With so many courses enrolled at or near capacity, students are faced with strategy decisions about gaining access at the last minute. Most cases of such access to one course opens a last minute seat in another and is vacated, but students may or may not be on waiting lists for the course that opens up. One strategy, as our data show, is to attempt to register for a desired course every few hours for as long as it takes for a seat to open up. Another is to work directly with the instructor to override limits. Another is to take something else and not keep trying for the first choice course. The result is many courses reenrolled at or near their limits, but many with a few seats left over after the dust settles.

LEVELS OF DEMAND BY DEPARTMENT AND COURSE LEVEL

The closer we get to the course and section level, the more meaningful the term "excess demand" becomes. Both supply and demand vary by department and by course level. Student demand for a major or for GUR courses or electives in each area differ, and also vary over time. Seats made available in courses offered by each department also differ, because resources differ, instructional modalities vary by discipline, and historical patterns influence course size. These departmental differences emerge most clearly among upper division courses, taken primarily by majors.

The following tables show SCH demand, demand ratios and demand per full-time equivalent faculty (FTEF) for each department. They also break down demand by course level. A second set of tables display other summary information as background to the demand table. These tables express demand in terms of Student Credit Hours (SCH). That is, demand is calculated not per course but per credits that students attempt to register for. Thus, 100 students attempting to enroll in one four credit course would generate 400 SCH of demand. This step is taken to make departments more comparable, because different departments structure their course credit levels differently.

The demand ratios shown in these tables may reflect student interest in the field, students' need for GURs offered by the department, and/or decisions on the part of the department to

offer larger or smaller courses or to restrict access to courses. These ratios act as summary measures composed of so many different forces that readers should beware of any simple interpretation or application. They are offered primarily to provide a bit of information to the Deans, Chairs and faculty who must make hard decisions about appropriate levels of service and how best to provide it.

Perusing the tables shows a wide range of demand ratios and of unmet demand per faculty FTE. Some of these will change over time, as students change interests. Others will remain stable because of university administrative decisions about where to put faculty resources. We also see in these tables that high-demand units have usually already responded by enlarging course access; the units with the highest demand ratios tend to be the same ones that offer more SCH per faculty.

Differences in student demand for the major are best illustrated by the table showing demand among 300 and 400 level courses. Demand for graduate level courses is, not surprisingly, low. Despite the fact that many of these courses meet jointly with 400 level seminars, the limited size of Western's graduate programs ensures that these courses will be under-enrolled in most cases. While a few units also diverge widely from others in demand for 100/200 level courses, most departments have more similar demand for 100/200 level courses than for 300/400 level courses. Presumably, the reason is that lower division courses draw on the entire pool of students, whereas upper division courses draw primarily on students interested in majoring in the field. Such interest sometimes swings widely over time and sometimes cannot be met given the size of a department's faculty.

We have no intent to imply that the demand ratios should be equal across units, nor that they should approximate 1.0. There is good reason to resist any routine method of basing faculty funding and curricular decisions on a simplistic formula such as a demand ratio. However, it is also worth considering that each unit with very low demand ratios in essence requires a different unit to experience higher demand, that student frustration with perceived lack of course access is no doubt based in part on the facts that 57.5% of Western students were unable to enroll in at least one of their first choice courses and that a few students made a great many attempts before filling a schedule.

**TABLES SHOWING
FALL 2001 SCH DEMAND FOR ALL COURSES AND BY COURSE LEVEL
SUMMARIZED BY DEPARTMENT/COLLEGE**

LIST OF TABLES AND SUMMARY OF CONTENTS:

SCH Course Demand by Department – all course levels

Summarizes several SCH-based factors cumulated from calculations at the course level for all courses in each unit. Includes seats available (the combined total of all course limits), total SCH course demand, unmet SCH demand (demand minus seats available), seats available and unmet demand per faculty (divided by FTE faculty not including T.A.s) and the ratio of total SCH demand to total SCH seats available.

SCH Course Demand by Department – 100/200 level

Same as above, for lower division courses.

SCH Course Demand by Department – 300/400 level

Same as above, for upper division courses.

SCH Course Demand by Department – Graduate level

Same as above, for graduate courses.

Other Course Data Summarized by Department – all course levels

Displays data relevant to course offerings and demand. Includes number of courses offered, number of seats in all those courses, average credits per course, total number of sections of those courses, average seats per section, and Full-Time Equivalent Faculty (FTEF), not including T.A.s.

Other Course Data Summarized by Department – 100/200 level

Same as above, for lower division courses.

Other Course Data Summarized by Department – 300-400 level

Same as above, for upper division courses.

Other Course Data Summarized by Department – graduate level

Same as above, for graduate courses.

SCH Course Demand by Department - All Course Levels

	Department	Sum of SCH Course Demand	Sum of SCH Seats Available	SCH Seats Available per Faculty	Unmet SCH Course Demand	Unmet SCH Course Demand per Faculty	Ratio of Demand to Seats Available
A&S Humanities	Communication	7955	3946	398.2	4009	404.5	2.0
	English	20015	12434	334.8	7581	204.1	1.6
	History	11270	8789	462.6	2481	130.6	1.3
	Journalism	3089	1399	193.0	1690	233.1	2.2
	Languages	11246	9806	381.1	1440	56.0	1.1
	Liberal Studies	4823	2913	332.9	1910	218.3	1.7
	Philosophy	7522	3495	436.9	4027	503.4	2.2
A&S Sci/Math	Biology	7148	5113	305.2	2035	121.5	1.4
	Chemistry	7004	7023	392.9	-19	-1.1	1.0
	Computer Science	6156	4428	369.0	1728	144.0	1.4
	Engineering Tech	3437	3411	243.6	26	1.9	1.0
	Geology	6191	4529	374.6	1662	137.5	1.4
	Mathematics	15625	12775	440.2	2850	98.2	1.2
	Physics	4768	3828	332.9	940	81.7	1.2
A&S Social Sci	Anthropology	10236	7267	665.5	2969	271.9	1.4
	CSD	1917	2417	433.2	-500	-89.6	0.8
	PEHR	6992	5403	443.6	1589	130.5	1.3
	Political Science	10663	4753	387.4	5910	481.7	2.2
	Psychology	19237	14146	547.9	5091	197.2	1.4
	Sociology	12774	8471	686.9	4303	348.9	1.5
CBE	Accounting	3704	3788	344.4	-84	-7.6	1.0
	Economics	6985	6042	394.9	943	61.6	1.2
	FMDS	6084	5096	253.7	988	49.2	1.2
	MBA	766	2332		-1566		0.3
	Management	7172	5544	396.0	1628	116.3	1.3
Fairhaven	Fairhaven College	4226	2828	165.3	1398	81.7	1.5
Fine Arts	Art	8562	4518	219.5	4044	196.5	1.9
	Dance	995	924	400.0	71	30.7	1.1
	Music	6428	6479	279.9	-51	-2.2	1.0
	Theatre	3999	3352	325.4	647	62.8	1.2
Huxley	Environmental Sci	6801	6260	540.6	541	46.7	1.1
	Geog & Env SS	3456	2366	162.4	1090	74.8	1.5
Woodring	Secondary Ed.	880	1140	90.5	-260	-20.7	0.8
	El Ed Certif progs	1247	1202	85.9	45	3.2	1.0
	Adult & Higher ed	348	645	184.3	-297	-84.9	0.5
	Special Ed.	1096	1886	186.7	-790	-78.2	0.6
	Instruct. technol	640	802	225.3	-162	-45.5	0.8
	Ed Admin	120	240	103.4	-120	-51.7	0.5
	Ed Found	1473	1222	223.8	251	46.0	1.2
	ARDC	196	184		12		1.1
A&S Programs	Amer Cult Stud	1576	665		911		2.4
	Can-Am Stud	16	48		-32		0.3
	East Asian	2676	1443		1233		1.9
	Linguistics	3379	2569		810		1.3
	Science Ed	353	420		-67		0.8
	Womens Stud	504	100		404		5.0
University Programs	Honors	392	421		-29		0.9
	Library Science	219	185		34		1.2
	Library	14	18		-4		0.8
	Seminar (FIGS)	630	580		50		1.1
	University	96	60		36		1.6

SCH Course Demand by Department - 100/200 Level Courses

	Department	Sum of SCH Course Demand	Sum of SCH Seats Available	SCH Seats Available per Faculty	Unmet SCH Course Demand	Unmet SCH Course Demand per Faculty	Ratio of Demand to Seats Available
A&S Humanities	Communication	5288	2955	298.2	2333	235.4	1.8
	English	9162	6061	163.2	3101	83.5	1.5
	History	8099	6020	316.8	2079	109.4	1.3
	Journalism	1490	805	111.0	685	94.5	1.9
	Languages	8230	6665	259.0	1565	60.8	1.2
	Liberal Studies	4191	2489	284.5	1702	194.5	1.7
	Philosophy	6694	2730	341.3	3964	495.5	2.5
A&S Sci/Math	Biology	5373	2968	177.2	2405	143.6	1.8
	Chemistry	5397	4716	263.8	681	38.1	1.1
	Computer Science	4289	2376	198.0	1913	159.4	1.8
	Engineering Tech	1820	1571	112.2	249	17.8	1.2
	Geology	4910	3077	254.5	1833	151.6	1.6
	Mathematics	13954	10827	373.1	3127	107.7	1.3
	Physics	4439	3313	288.1	1126	97.9	1.3
A&S Social Sci	Anthropology	7414	5043	461.8	2371	217.1	1.5
	CSD	483	420	75.3	63	11.3	1.2
	PEHR	3439	2300	188.8	1139	93.5	1.5
	Political Science	7100	2500	203.7	4600	374.9	2.8
	Psychology	11412	8350	323.4	3062	118.6	1.4
	Sociology	8940	5426	440.0	3514	284.9	1.6
CBE	Accounting	2208	2108	191.6	100	9.1	1.0
	Economics	4428	3780	247.1	648	42.4	1.2
	FMDS						
	MBA	1308	900		408		1.5
	Management	1664	1224	87.4	440	31.4	1.4
Fairhaven	Fairhaven College	2136	1421	83.1	715	41.8	1.5
Fine Arts	Art	6364	2636	128.1	3728	181.1	2.4
	Dance	880	504	218.2	376	162.8	1.7
	Music	5268	4312	186.3	956	41.3	1.2
	Theatre	3028	2402	233.2	626	60.8	1.3
Huxley	Environmental Sci	2457	1977	170.7	480	41.5	1.2
	Geog & Env SS	2414	1512	103.8	902	61.9	1.6
Woodring	Secondary Ed.						
	EI Ed Certif progs						
	Adult & Higher ed						
	Special Ed.						
	Instruct. technol						
	Ed Admin						
	Ed Found	309	78	14.3	231	42.3	4.0
A&S Programs	ARDC						
	Amer Cult Stud	1011	390		621		2.6
	Can-Am Stud						
	East Asian	2606	1318		1288		2.0
	Linguistics	3203	2425		778		1.3
	Science Ed						
University Programs	Womens Stud	504	100		404		5.0
	Honors	284	328		-44		0.9
	Library Science						
	Library	14	18		-4		0.8
	Seminar (FIGS)	630	580		50		1.1
	University						

SCH Course Demand by Department - 200/300 Level Courses

	Department	Sum of SCH Course Demand	Sum of SCH Seats Available	SCH Seats Available per Faculty	Unmet SCH Course Demand	Unmet SCH Course Demand per Faculty	Ratio of Demand to Seats Available
A&S Humanities	Communication	2667	991	100.0	1676	169.1	2.7
	English	10488	6093	164.1	4395	118.3	1.7
	History	3055	2609	137.3	446	23.5	1.2
	Journalism	1599	594	81.9	1005	138.6	2.7
	Languages	3016	3141	122.1	-125	-4.9	1.0
	Liberal Studies	632	424	48.5	208	23.8	1.5
	Philosophy	828	765	95.6	63	7.9	1.1
A&S Sci/Math	Biology	1754	2085	124.5	-331	-19.8	0.8
	Chemistry	1602	2287	127.9	-685	-38.3	0.7
	Computer Science	1635	1692	141.0	-57	-4.8	1.0
	Engineering Tech	1617	1840	131.4	-223	-15.9	0.9
	Geology	1165	1274	105.4	-109	-9.0	0.9
	Mathematics	1515	1636	56.4	-121	-4.2	0.9
	Physics	329	515	44.8	-186	-16.2	0.6
A&S Social Sci	Anthropology	2727	2124	194.5	603	55.2	1.3
	CSD	1053	1355	242.8	-302	-54.1	0.8
	PEHR	3477	2998	246.1	479	39.3	1.2
	Political Science	3474	2118	172.6	1356	110.5	1.6
	Psychology	7367	5086	197.0	2281	88.3	1.4
	Sociology	3834	3045	246.9	789	64.0	1.3
CBE	Accounting	1496	1680	152.7	-184	-16.7	0.9
	Economics	2557	2262	147.8	295	19.3	1.1
	FMDS	4776	4196	208.9	580	28.9	1.1
	MBA						
	Management	5508	4320	308.6	1188	84.9	1.3
Fairhaven	Fairhaven College	2090	1407	82.2	683	39.9	1.5
Fine Arts	Art	2186	1822	88.5	364	17.7	1.2
	Dance	115	420	181.8	-305	-132.0	0.3
	Music	1112	1962	84.8	-850	-36.7	0.6
	Theatre	971	950	92.2	21	2.0	1.0
Huxley	Environmental Sci	4128	4031	348.1	97	8.4	1.0
	Geog & Env SS	1003	794	54.5	209	14.3	1.3
Woodring	Secondary Ed.	608	820	65.1	-212	-16.8	0.7
	EI Ed Certif progs	1215	1082	77.3	133	9.5	1.1
	Adult & Higher ed	132	210	60.0	-78	-22.3	0.6
	Special Ed.	1021	1716	169.9	-695	-68.8	0.6
	Instruct. technol	564	667	187.4	-103	-28.9	0.8
	Ed Admin						
	Ed Found	1056	844	154.6	212	38.8	1.3
	ARDC						
A&S Programs	Amer Cult Stud	565	275		290		2.1
	Can-Am Stud	16	48		-32		0.3
	East Asian	70	125		-55		0.6
	Linguistics	176	144		32		1.2
	Science Ed	301	340		-39		0.9
	Womens Stud						
University Programs	Honors	108	93		15		1.2
	Library Science	219	185		34		1.2
	Library						
	Seminar (FIGS)						
	University	96	60		36		1.6

SCH Course Demand by Department - Grad Level Courses

	Department	Sum of SCH Course Demand	Sum of SCH Seats Available	SCH Seats Available per Faculty	Unmet SCH Course Demand	Unmet SCH Course Demand per Faculty	Ratio of Demand to Seats Available
A&S Humanities	Communication						
	English	365	280	7.5	85	2.3	1.3
	History	116	160	8.4	-44	-2.3	0.7
	Journalism						
	Languages						
	Liberal Studies						
	Philosophy						
A&S Sci/Math	Biology	21	60	3.6	-39	-2.3	0.4
	Chemistry	5	20	1.1	-15	-0.8	0.3
	Computer Science	232	360	30.0	-128	-10.7	0.6
	Engineering Tech						
	Geology	116	178	14.7	-62	-5.1	0.7
	Mathematics	156	312	10.8	-156	-5.4	0.5
	Physics						
A&S Social Sci	Anthropology	95	100	9.2	-5	-0.5	1.0
	CSD	381	642	115.1	-261	-46.8	0.6
	PEHR	76	105	8.6	-29	-2.4	0.7
	Political Science	89	135	11.0	-46	-3.7	0.7
	Psychology	458	710	27.5	-252	-9.8	0.6
	Sociology						
CBE	Accounting						
	Economics						
	FMDS						
	MBA	766	2332		-1566		0.3
	Management						
Fairhaven	Fairhaven College						
Fine Arts	Art	12	60	2.9	-48	-2.3	0.2
	Dance						
	Music	48	205	8.9	-157	-6.8	0.2
	Theatre						
Huxley	Environmental Sci	216	252	21.8	-36	-3.1	0.9
	Geog & Env SS	39	60	4.1	-21	-1.4	0.7
Woodring	Secondary Ed.	272	320	25.4	-48	-3.8	0.9
	EI Ed Certif progs	32	120	8.6	-88	-6.3	0.3
	Adult & Higher ed	216	435	124.3	-219	-62.6	0.5
	Special Ed.	75	170	16.8	-95	-9.4	0.4
	Instruct. technol	76	135	37.9	-59	-16.6	0.6
	Ed Admin	120	240	103.4	-120	-51.7	0.5
	Ed Found	108	300	54.9	-192	-35.2	0.4
	ARDC	196	184		12		1.1
A&S Programs	Amer Cult Stud						
	Can-Am Stud						
	East Asian						
	Linguistics						
	Science Ed	52	80		-28		0.7
	Womens Stud						
University Programs	Honors						
	Library Science						
	Library						
	Seminar (FIGS)						
	University						

Other Course Data Summarized by Department - All Course Levels

	Department	Number of Courses	Sum of Seats Available	Average Credits per Course	Number of Sections	Average Seats Available per Section	FTEF (Does Not Include TAs)
A&S Humanities	Communication	16	951	4.0	23	42.4	9.91
	English	45	2646	4.9	98	27.4	37.14
	History	25	2098	4.4	41	51.0	19.00
	Journalism	10	367	3.5	18	24.8	7.25
	Languages	40	2265	4.1	62	36.4	25.73
	Liberal Studies	11	641	4.4	15	42.5	8.75
	Philosophy	11	1120	3.3	20	55.5	8.00
A&S Sci/Math	Biology	24	1336	3.5	49	28.4	16.75
	Chemistry	17	1678	3.4	51	32.7	17.88
	Computer Science	25	1253	3.4	59	25.1	12.00
	Engineering Tech	31	892	3.8	49	17.8	14.00
	Geology	21	1148	3.9	30	38.0	12.09
	Mathematics	34	2809	4.0	77	35.2	29.02
	Physics	13	957	3.6	17	56.3	11.50
A&S Social Sci	Anthropology	25	1604	4.2	40	39.8	10.92
	CSD	18	788	2.9	18	43.6	5.58
	PEHR	63	2589	2.2	100	27.0	12.18
	Political Science	18	993	4.6	29	33.3	12.27
	Psychology	45	3149	4.0	60	52.7	25.82
	Sociology	23	1758	4.5	29	59.9	12.33
CBE	Accounting	14	947	4.0	24	39.1	11.00
	Economics	17	1543	3.7	33	46.5	15.30
	FMDS	25	1349	3.9	44	40.0	20.08
	MBA	13	483	4.8	13	37.2	
	Management	16	1386	4.0	30	46.0	14.00
Fairhaven	Fairhaven College	36	749	3.9	47	16.3	17.11
Fine Arts	Art	37	1260	4.0	48	26.0	20.58
	Dance	11	412	2.5	20	26.5	2.31
	Music	63	2808	2.0	69	40.6	23.15
	Theatre	25	1105	3.0	36	31.0	10.30
Huxley	Environmental Sci	42	1928	3.4	47	41.0	11.58
	Geog & Env SS	10	639	3.3	17	38.4	14.57
Woodring	Secondary Ed.	9	315	3.8	12	26.3	12.59
	EI Ed Certif progs	10	369	3.2	16	25.9	13.99
	Adult & Higher ed	8	280	2.4	10	28.0	3.50
	Special Ed.	20	609	3.1	21	29.0	10.10
	Instruct. technol	9	332	2.9	14	23.7	3.56
	Ed Admin	4	60	4.0	4	15.0	2.32
	Ed Found	6	312	3.8	15	20.7	5.46
	ARDC	1	46	4.0	3	15.0	
A&S Programs	Amer Cult Stud	6	205	3.2	7	27.9	1.00
	Can-Am Stud	1	12	4.0	1	12.0	0.50
	East Asian	4	303	4.8	5	60.4	
	Linguistics	3	551	4.3	6	90.8	
	Science Ed	4	120	3.3	5	24.0	
	Womens Stud	1	25	4.0	1	25.0	0.50
University Programs	Honors	4	113	3.5	5	22.6	1.08
	Library Science	3	55	3.3	3	18.3	
	Library	1	18	1.0	1	18.0	
	Seminar (FIGS)	1	290	2.0	10	29.0	
	University	1	30	2.0	1	30.0	

Other Course Data Summarized by Department - 100/200 Level Courses

	Department	Number of Courses	Sum of Seats Available	Average Credits per Course	Number of Sections	Average Seats Available per Section	FTEF (Does Not Include TAs)
A&S Humanities	Communication	7	715	4.0	13	54.5	9.91
	English	8	1361	4.9	47	29.0	37.14
	History	8	1482	4.3	23	64.3	19.00
	Journalism	2	191	4.0	7	33.7	7.25
	Languages	21	1434	4.6	40	35.8	25.73
	Liberal Studies	8	535	4.5	12	44.3	8.75
	Philosophy	6	895	3.2	15	59.0	8.00
A&S Sci/Math	Biology	5	685	4.4	15	45.0	16.75
	Chemistry	5	1020	4.6	37	27.5	17.88
	Computer Science	8	644	3.8	42	21.0	12.00
	Engineering Tech	9	385	4.1	19	19.4	14.00
	Geology	4	764	4.0	12	63.7	12.09
	Mathematics	17	2317	4.1	57	38.2	29.02
	Physics	8	807	3.8	12	67.3	11.50
A&S Social Sci	Anthropology	5	1045	4.8	8	130.0	10.92
	CSD	1	140	3.0	1	140.0	5.58
	PEHR	37	1626	1.4	71	25.1	12.18
	Political Science	4	500	5.0	14	34.9	12.27
	Psychology	7	1738	4.9	11	158.0	25.82
	Sociology	7	1118	4.4	13	85.2	12.33
CBE	Accounting	2	527	4.0	10	51.9	11.00
	Economics	3	945	4.0	16	59.1	15.30
	FMDS	2	300	3.0	6	50.0	20.08
	MBA						
	Management	1	306	4.0	4	76.5	14.00
Fairhaven	Fairhaven College	17	403	3.8	18	22.0	17.11
Fine Arts	Art	16	818	3.6	23	34.4	20.58
	Dance	5	252	2.0	13	28.4	2.31
	Music	28	1864	1.8	33	56.4	23.15
	Theatre	12	810	2.9	23	35.7	10.30
Huxley	Environmental Sci	4	659	3.0	5	131.6	11.58
	Geog & Env SS	3	393	3.0	6	61.7	14.57
Woodring	Secondary Ed.						12.59
	EI Ed Certif progs						13.99
	Adult & Higher ed						3.50
	Special Ed.						10.10
	Instruct. technol						3.56
	Ed Admin						2.32
	Ed Found	1	26	3.0	1	25.0	5.46
A&S Programs	ARDC						
	Amer Cult Stud	4	130	3.0	4	30.0	1.00
	Can-Am Stud						0.50
	East Asian	3	278	4.7	4	69.3	
	Linguistics	2	515	4.5	5	103.0	
	Science Ed						
University Programs	Womens Stud	1	25	4.0	1	25.0	0.50
	Honors	2	82	4.0	3	27.3	1.08
	Library Science						
	Library	1	18	1.0	1	18.0	
	Seminar (FIGS)	1	290	2.0	10	29.0	
University	University						

Other Course Data Summarized by Department - 200/300 Level Courses

	Department	Number of Courses	Sum of Seats Available	Average Credits per Course	Number of Sections	Average Seats Available per Section	FTEF (Does Not Include TAs)
A&S Humanities	Communication	9	236	4.0	10	26.6	9.91
	English	33	1229	4.9	47	27.0	37.14
	History	14	581	4.4	15	38.3	19.00
	Journalism	8	176	3.4	11	19.1	7.25
	Languages	19	831	3.5	22	37.6	25.73
	Liberal Studies	3	106	4.0	3	35.3	8.75
	Philosophy	5	225	3.4	5	45.0	8.00
A&S Sci/Math	Biology	16	615	3.5	31	22.0	16.75
	Chemistry	10	638	3.3	12	52.5	17.88
	Computer Science	13	519	3.1	13	39.2	12.00
	Engineering Tech	22	507	3.6	30	16.7	14.00
	Geology	14	328	3.9	15	21.4	12.09
	Mathematics	13	414	3.9	16	28.6	29.02
	Physics	5	150	3.4	5	30.0	11.50
A&S Social Sci	Anthropology	18	539	3.9	30	17.7	10.92
	CSD	6	363	3.8	6	60.5	5.58
	PEHR	24	933	3.4	27	33.1	12.18
	Political Science	12	456	4.5	13	33.9	12.27
	Psychology	26	1201	4.0	36	33.8	25.82
	Sociology	16	640	4.6	16	39.4	12.33
CBE	Accounting	12	420	4.0	14	30.0	11.00
	Economics	14	598	3.6	17	34.8	15.30
	FMDS	23	1049	4.0	38	38.4	20.08
	MBA						
	Management	15	1080	4.0	26	41.3	14.00
Fairhaven	Fairhaven College	19	346	4.0	29	12.7	17.11
Fine Arts	Art	20	427	4.3	24	18.4	20.58
	Dance	6	160	2.8	7	22.9	2.31
	Music	29	884	2.1	30	29.3	23.15
	Theatre	13	295	3.0	13	22.6	10.30
Huxley	Environmental Sci	33	1206	3.4	37	32.6	11.58
	Geog & Env SS	6	226	3.5	10	26.3	14.57
Woodring	Secondary Ed.	5	235	3.6	8	29.4	12.59
	EI Ed Certif progs	9	339	3.1	15	25.7	13.99
	Adult & Higher ed	1	105	2.0	3	35.0	3.50
	Special Ed.	16	539	3.3	17	31.7	10.10
	Instruct. technol	7	297	2.7	12	24.8	3.56
	Ed Admin						2.32
	Ed Found	3	211	4.0	9	23.4	5.46
	ARDC						
A&S Programs	Amer Cult Stud	2	75	3.5	3	25.0	1.00
	Can-Am Stud	1	12	4.0	1	12.0	0.50
	East Asian	1	25	5.0	1	25.0	
	Linguistics	1	36	4.0	1	30.0	
	Science Ed	3	100	3.0	4	25.0	
	Womens Stud						0.50
University Programs	Honors	2	31	3.0	2	15.5	1.08
	Library Science	3	55	3.3	3	18.3	
	Library						
	Seminar (FIGS)						
	University	1	30	2.0	1	30.0	

Other Course Data Summarized by Department - Grad Level Courses

	Department	Number of Courses	Sum of Seats Available	Average Credits per Course	Number of Sections	Average Seats Available per Section	FTEF (Does Not Include TAs)
A&S Humanities	Communication				4	14.0	9.91
	English	4	56	5.0	3	11.7	37.14
	History	3	35	4.7			19.00
	Journalism						7.25
	Languages						25.73
	Liberal Studies						8.75
	Philosophy						8.00
A&S Sci/Math	Biology	3	36	2.0	3	12.0	16.75
	Chemistry	2	20	1.0	2	10.0	17.88
	Computer Science	4	90	4.0	4	22.5	12.00
	Engineering Tech						14.00
	Geology	3	56	3.3	3	18.3	12.09
	Mathematics	4	78	4.0	4	19.5	29.02
	Physics						11.50
A&S Social Sci	Anthropology	2	20	5.0	2	10.0	10.92
	CSD	11	285	2.5	11	25.6	5.58
	PEHR	2	30	3.5	2	15.0	12.18
	Political Science	2	37	4.0	2	18.5	12.27
	Psychology	12	210	3.3	13	16.2	25.82
	Sociology						12.33
CBE	Accounting						11.00
	Economics						15.30
	FMDS						20.08
	MBA	13	483	4.8	13	37.2	
	Management						14.00
Fairhaven	Fairhaven College						17.11
Fine Arts	Art	1	15	4.0	1	15.0	20.58
	Dance						2.31
	Music	6	60	3.2	6	10.0	23.15
	Theatre						10.30
Huxley	Environmental Sci	5	63	3.8	5	12.2	11.58
	Geog & Env SS	1	20	3.0	1	20.0	14.57
Woodring	Secondary Ed.	4	80	4.0	4	20.0	12.59
	EI Ed Certif progs	1	30	4.0	1	30.0	13.99
	Adult & Higher ed	7	175	2.4	7	25.0	3.50
	Special Ed.	4	70	2.3	4	17.5	10.10
	Instruct. technol	2	35	3.5	2	17.5	3.56
	Ed Admin	4	60	4.0	4	15.0	2.32
	Ed Found	2	75	4.0	5	15.0	5.46
	ARDC	1	46	4.0	3	15.0	
A&S Programs	Amer Cult Stud						1.00
	Can-Am Stud						0.50
	East Asian						
	Linguistics						
	Science Ed	1	20	4.0	1	20.0	
	Womens Stud						0.50
University Programs	Honors						1.08
	Library Science						
	Library						
	Seminar (FIGS)						
	University						

DEPARTMENTAL COURSE LISTS

Enclosed with this report is a listing of student demand for each course offered by your department in fall, 2001. It should be self-explanatory for the most part. The course list shows total demand for each course and, where multiple sections exist, for each section. Because some chairs may not choose to read this full report, documentation of these tables is provided with the tables, rather than here.

We hope these figures will offer some information of value to departments as you plan courses for the 2002-2003 academic year. We plan to follow these data for fall 2001 with data for winter 2002 and, if possible, for spring 2001.